

## **Tutorial 5**

### **Merge Sort**

#### **Exercise 1**

Demonstrate the working of merge sort on sequence (13, 5, 14, 11, 16, 12, 1, 15, 23, 20)?

### **Quick Sort**

#### **Exercise 2**

Demonstrate the working of Partition on sequence (13, 5, 14, 11, 16, 12, 1, 15). What is the value of i returned at the completion of Partition?

#### **Exercise 3**

Apply Quick sort on a given sequence 7 11 14 6 9 4 3 12. What is the sequence after first phase, pivot is first element?

#### **Exercise 4**

A machine needs a minimum of 200 sec to sort 1000 elements by Quick sort. What is the minimum time needed to sort 200 elements will be approximately?